Registered Qualified Professionals

1. Introduction

1.1. Registered Registered Qualified Professionals (RQP) should be Professional Engineer duly registered by the Engineering Council of India, having sufficient experience in the field of design, engineering, testing and certification of trenchless projects and member of IndSTT. These professionals should also be registered with Indian Society for Trenchless Technology (IndSTT) to provide third party assessment of the ongoing trenchless project. RQP should discharge their duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and good engineering practice.

2. Scope

2.1. The scope of the RQP includes monitoring the overall progress of the project as well as supervision, testing and commissioning works related to the construction or maintenance of sub-surface utility networks through trenchless technology as a third party independent consultant.

3. Eligibility criteria for individual candidates and corporate nominees

3.1. M.E./M.Tech. With 3 years professional experience, or
3.2. B.E./B.Tech./B.Sc.Engg. With 5 years professional experience, or
3.3. Diploma in Engg. With 7 years professional experience in trenchless or allied field.
3.4. Applicant should be a Member of the IndSTT.

4. Knowledge of trenchless techniques

4.1. The RQP should have sufficient understanding, knowledge and experience of the approved trenchless techniques permitted to be used under Urban Roads.

5. Waste disposal/Traffic management/Safety

5.1. Several of the trenchless methods employed for installing utilities below the road surface generate substantial drilling / excavation waste fluids and solids during execution. These fluids and solids and all other excavated materials should be disposed off properly to avoid harm to road structures, local inhabitants and above ground facilities etc. The RQP should be aware of the applicable relevant legislation and local and national requirements for environmental protection.

5.2. RQP should be able to check the traffic management plan prepared by utility owners on the basis of the technique selected and the above surface permanent or temporary works requirements.

5.3. RQP should be able to identify the hazards associated with underground / confined space construction works.

5.4. RQP should be aware of the safety rules which are applicable to the particular operation being carried out.

6. Restoration of pits/surface locations

6.1. The RQP should be well acquainted with the guidelines for remedial measures for pits and road surface restoration that must be carried out after the project completion.

7. Proposed utility layout plan

7.1. RQP should have sufficient knowledge of the various techniques in vogue for the identification and location of existing subsurface utilities.

7.2. RQP should be able to read, interpret and verify the proposed subsurface utility layout plan.

7.3. RQP should be able to check the conformity of executed work with respect to the utility layout plan and advise corrective measures, if any.

8. Evaluating equipment capacity & capability

8.1. The RQP should be able to evaluate the capacity and quality of equipment to be used for the trenchless methods employed.

9. Operator's qualification

9.1. The RQP should be aware of the minimum qualifying requirements for an operator for executing any trenchless project.

9.2. The RQP should be able to ensure that machines are operated by qualified operators at any trenchless project.

10. Selection and registration

10.1. The RQP should pass the examination conducted by IndSTT to ensure understanding of the reference standards and should get his name registered with IndSTT to practice as RQP.

11. Commercial terms & conditions

11.1. For conducting third party inspection services, utility owners shall pay the service charges to road owning agency for onward reimbursement to RQP at the following rates:

Project Cost (Rs.)	**-**	**Payment (Rs.)**
25,000/- and less	:	3000/-
25,001/- to 1,00,000/-	:	6000/-
1,00,001/- to 2,50,000/-	:	9000/-
2,50,001/- to 5,00,000/-	:	12000/-
5,00,001/- to 7,50,000/-	:	15000/-
7,50,001/- to 10,00,000/-	:	18000/-
10,00,001/- and above		2% of the total cost

These payments shall have to be made while making the road cutting applications.

12. Deployment of RQP

12.1. It should be the duty of the utility owners to whom the project has been awarded to notify the RQP the date of commencement of work at site, at least seven (7) days in advance. The utility owners should also send a copy of the notice to the road owning agency and IndSTT for information.

12.2. The deployment period of the RQP should start from the approved date of road cutting permission and shall be up to the completion of the project.

13. Powers to issue direction

13.1. The RQP should communicate deficiencies observed during various stages of the project to the utility owner and others as per his charter of assignment in writing and keep a record of the same.

13.2. The RQP should give reasonable time to the service provider or utility owner to remove the deficiencies. If, in the judgment of the RQP, the deficiency must be removed before proceeding further, he should be empowered to issue such directive to the utility owner, giving reasons for the same.

13.3. The utility owner should follow the directions of the RQP. In case of dispute, the utility owner may approach IndSTT for mediation. IndSTT will review the directions of the RQP and decision of the IndSTT shall be binding on the RQP & utility owner.

14. Project supervision and monitoring

14.1. The RQP should review proposed utility route plan, estimate, and BOQ to identify shortcomings, omissions, inconsistencies and ambiguities in detailed engineering documents.

14.2. The RQP should finalize quality assurance documents like the method statement, quality plans, inspection and test plans (ITP) forms, reports, etc. as per requirements of the project and ensure implementation of the same.

14.3. The RQP should assist in the interpretation of technical specifications etc, as and when required by the client.

14.4. The RQP should review contractor’s detailed work programme and suggest modifications, wherever required, to ensure prevention of damage to existing subsurface utilities, structures and assets, accidents, compliance with the norms and required safety precautions.

14.5. The RQP should review the suitability of contractors superintending and key personnel and suggest modifications where required.

14.6. The RQP should review the construction methodology of the contractor for execution of works in order to ensure that the same is economical & satisfactory in respect of technical requirements, project implementation schedule, environment aspects and safety of the works, property, personnel & general public.

14.7. The RQP should assist the client in approval of the field testing laboratories set up by various contractors in respect of its facilities, adequacy, arrangements, equipment and laboratory staff etc.

14.8. The RQP should conduct technical audit on total testing done and issue non conformance report and propose appropriate corrective and preventive actions to be taken by the site engineer and the employer.

14.9. The RQP should assist the site engineer in regularly monitoring and reviewing progress of the works. The RQP should also identify the problem areas likely to cause delays in progress in implementation of the project as per schedule.

14.10. The RQP should review suitability of source and quality of construction materials on the basis of inspections, test results/manufacturer's certificates etc.

14.11. The RQP should develop forms and procedures in order to ensure implementation of a proper quality assurance system on all activities and aspects of the project.

14.12. The RQP should review the quality assurance/control system & procedures being followed by the contractor.

14.13. The RQP should assist the site engineer in matters connected with the quality assurance/control aspect of works in order to ensure better quality of work and its conformity with the standards & specifications prescribed in the contract.

14.14. The RQP should do the inspection of the construction equipment in order to assess their suitability for carrying out the works timely.

14.15. The RQP should prepare periodical progress reports and project closure report describing the progress of works, problem areas encountered and actions taken to overcome them by the relevant authority.

14.16. The RQP should inspect the works on completion and indicate to the Engineer any outstanding works to be carried out by the contractor prior to issuance of certificate of completion by the engineer, as well as any defects to be rectified during defects liability period.

15. Accidents/Road cave-ins/Damage to structures

15.1. The RQP should supervise the works so as to avoid any accidents/road cave-ins/damages to subsurface structures.

15.2. However, in case of accidents/road cave-ins/damages to subsurface structures etc., the service provider or the utility owner shall have to rectify such damages as may be required at their own cost.

16. Certificate of completion

16.1. On completion of the project the RQP will issue the certificate of completion to the executing agency on behalf of the road owning agency.

16.2. The RQP should check & certify the As-Built Drawing (ABD) of the completed trenchless project before issuing the certificate of completion.